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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,376

07/17/2003

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10517/173

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23838 7590 05/22/2008

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EXAMINER

HODGE, ROBERT W

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,376	Applicant(s) HAYASHI ET AL.	
	Examiner ROBERT HODGE	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1,3,4,8-14 and 17-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks, filed 1/24/08, with respect to the rejection of claims 1 and 8 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive. The rejection of claims 1 and 8 under 35 U.S.C. 112 second paragraph has been withdrawn.

Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. Regarding the rejection of claim 3 under 35 U.S.C. 112 second paragraph, the claim still is indefinite because there is still only one surface recited in the claim and therefore the rejection will be maintained.

Regarding the prior art rejection applicants' arguments are not entirely commensurate in scope with instant claim 1. Applicants state that Schmid does not teach the retaining portions of certain embodiments of the present invention such as a retaining portion in combination with a sealant in a gel state. While claim 1 recites that the sealant may be a gel material, claim 1 also recites that the sealant may also be a high viscosity material or a pressure sensitive adhesive material. Therefore as long as the prior art teaches one of the three types of sealants as recited in claim 1 it will read on claim 1. As was outlined in the Non-Final office action dated 10/30/07 on page 3, last full paragraph, line 4, Schmid teaches an adhesive material (inherently pressure sensitive). Therefore the burden has been shifted to applicants to prove through evidence not arguments that the adhesive material of Schmid is not pressure sensitive said burden not being met. Furthermore because Schmid is assembling the fuel cell

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stack with pressure it is even more apparent that Schmid's adhesive material is in fact pressure sensitive. Applicants further allege that the Non-Final Office action appears to rely on Official Notice to support the rejection. However this is not the case. The Office action relies on case law, namely two court decisions; *Nerwin v. Erlichman* and *In re Dailey*, which are decisions that affirm the offices position regarding obviousness. In both court cases as long as the disclosure of the invention does not show criticality of a claimed feature, the office may rely on the court decision when making an obviousness type rejection to in fact show obviousness. In this case the Examiner clearly stated in the Non-Final Office Action dated 10/30/07 on page 5 that the instant disclosure clearly does not show any criticality for the claimed features and therefore the features are obvious in view of Schmid's teachings and the court case decisions as outlined in the Office Action. Therefore the prior art rejections will be maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regards to claim 3, it is unclear how "the surfaces facing each other" can exist when there is only one surface being recited in the claim. As long as the prior art

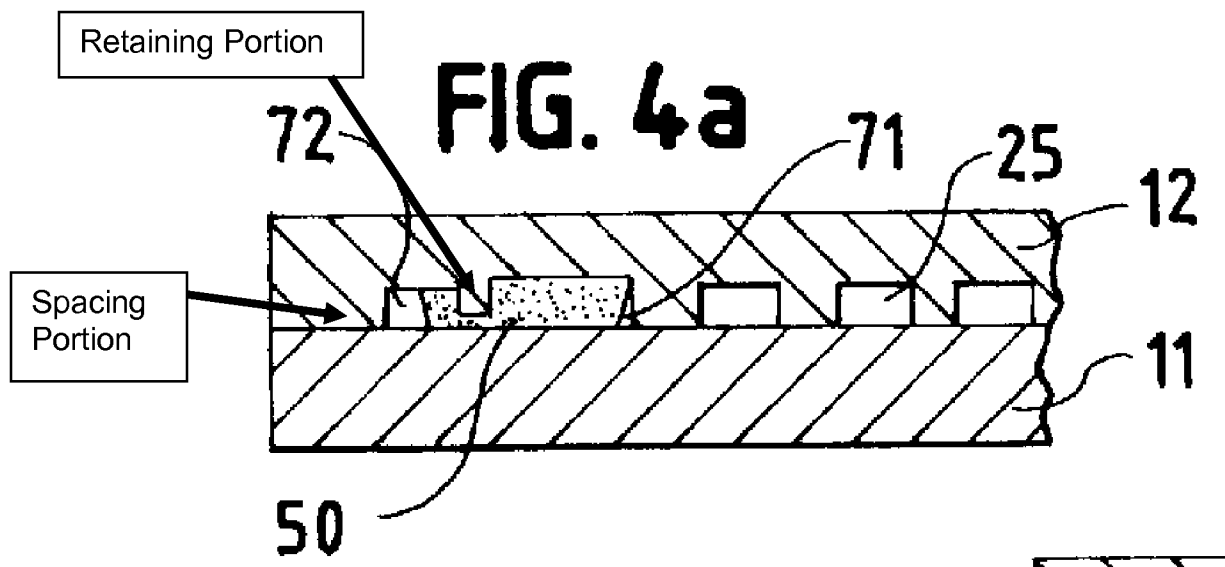
teaches either the retaining portion formed on one surface of a component it will read on claim 3 as recited.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 4, 8-14 and 17-21 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,080,503 hereinafter Schmid.

Schmid teaches solid polymer electrolyte fuel cell stacks (which as defined by applicants in the instant specification paragraph [0048] is a low temperature type fuel cell) comprising a plurality of components including but not limited to separators and electrolyte membranes with an adhesive material (inherently pressure sensitive) that is elastomeric and is selected for its specific compatibility of physical and chemical characteristics to be used in solid polymer electrolyte fuel cell stacks, said adhesive material being adhesive and interposed between the plurality of fuel cell components wherein a retaining portion and a spacing portion are formed on a surface of a separator plate (illustrated in figure 4a below);



wherein the spacing portion is formed along an outer periphery of the separator, wherein the adhesive material, the spacing portion and the retaining portion are all formed within the fuel cell unit, the stack further comprising manifolds that are formed inside the electrochemically active area and the adhesive material is formed along the outer edge (see column 6, lines 43-46) (since the spacing portion is clearly at an outer periphery of the entire fuel cell unit and the manifold is formed at an interior position such as the electrochemically active area, the spacing portion will clearly be formed outside of the manifold) (see figure 4a, column 1, lines 55-61, column 2, lines 30-33, column 5, lines 12-46, column 6, line 22 – column 8, line 67). Schmid further teaches that the adhesive material can be electrically insulating and is applied across the substantial entire contact surfaces of the separator plates (see column 5, lines 25-26 and line 34 and column 8, lines 35-36).

Schmid as described above teaches the claimed invention except for a spacing portion formed separately from the plurality of components and a retaining portion

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formed concave or convex toward the sealant. With regards to these features the Examiner as found no criticality of either of the above listed features in the instant specification. For Example in paragraph [0054] the first sentence describes that the spacing portion may be integrally or separately formed. There is no disclosure of whether one formation is more critical than the other and furthermore the discussion of separately forming is only mentioned in the first sentence of paragraph [0054] and is not even illustrated in the drawings. Also in paragraph [0056] it is stated that "Rather than being such a concave or convex portion, the retaining portion 33 may merely be a plane portion..." this too shows no criticality to the shape of the retaining portion. Therefore it would have been obvious to one having ordinary skill in the art to separately form the spacing portion of Schmid since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art (*Nerwin v. Erlichman*, 168 USPQ 177, 179) and it further would have been obvious to one having ordinary skill in the art to form the retaining portion in either a convex or concave shape since it has been held that a change in shape is generally recognized as being within the level of ordinary skill in the art (*In re Dailey* 149 USPQ 47, 50 (CCPA 1966) and *Glue Co. v. Upton* 97 US 3, 24 (USSC 1878)).

Regarding claim 3, Schmid teaches a second retaining portion 55 on another component of the fuel cell stack, see figure 3b.

Regarding claim 8, Schmid teaches the claimed invention except for another spacing portion on another component. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to an additional spacing

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portion on another component of the fuel cell of Schmid, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. It should be noted that due to the many different embodiments disclosed in the instant specification embodying, 1, 2, 3, 4...etc spacing portions on separate components of the fuel cell no criticality is shown for having two spacing portions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 2002/0197519 teaches a concave retaining portion in a fuel cell component.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. H./
Examiner, Art Unit 1795

/Jonathan Crepeau/
Primary Examiner, Art Unit 1795